

BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

DOCKET NO. HP07-001

IN THE MATTER OF THE APPLICATION OF TRANSCANADA KEYSTONE PIPELINE,
LP FOR A PERMIT UNDER THE SOUTH DAKOTA ENERGY CONVERSION AND
TRANSMISSION FACILITY ACT TO CONSTRUCT THE KEYSTONE PIPELINE
PROJECT

Surrebuttal Testimony of John Muehlhausen on Behalf of the
Staff of the South Dakota Public Utilities Commission

November 28, 2007

1 BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

2 SURREBUTTAL TESTIMONY OF JOHN MUEHLHAUSEN

3 **Q: Please state your name and business address.**

4 A: John Muehlhausen of Merjent, Inc. of 615 First Avenue Northeast, Suite 425,
5 Minneapolis, Minnesota 55413.

6 **Q: Did you provide direct testimony in this proceeding?**

7 A: Yes.

8 **Q: In rebuttal, to whose direct testimony are you responding?**

9 A: I am responding to the direct testimony of Curt Hohn.

10 **Q: According to Curt Hohn’s testimony, the proposed project has the potential to cause**
11 **irreversible long-term damage to native grasslands in every county crossed. Can**
12 **you comment on this testimony?**

13 A: Grasslands and prairies are, according to the Nature Conservancy, considered the most
14 threatened vegetation communities in the United States. Although statistics vary, studies
15 suggest that only a fraction of South Dakota’s grasslands remain. Most has been lost to
16 agriculture, urbanization, and mineral exploration, or has been altered by invasions of
17 non-native plants.

18 According to the Environmental Impact Statement (EIS) for the Keystone
19 Pipeline Project prepared by the U.S. Department of State, an estimated 29 miles of
20 native prairie and/or grasslands along the construction right-of-way would be affected by
21 the proposed project. The EIS describes potential pipeline impacts on native prairies as
22 “irreversible” because destruction of the sod layer during trenching may require more
23 than a century to recover.

1 As with other issues, there are varying opinions on the nature, degree, and
2 significance of pipeline impacts on native prairies in general. Environmental
3 Assessments and Environmental Impact Statements prepared for other pipeline projects
4 by other agencies suggest that pipeline construction impact on native prairies and
5 grasslands generally ranges from temporary and minor (less than 3 years) to long term
6 (about 20 years) (for examples refer to environmental analyses prepared for Federal
7 Energy Regulatory Commission dockets CP04-400-001, CP04-413-000, CP05-50-000,
8 CP07-90-000, and CP07-207-000, and Bureau of Land Management case numbers COC-
9 69548 and WYW-166510).

10 Pipeline impacts on prairies are probably long term. Reestablishing species
11 diversity and rebuilding prairie sod likely would take several years. However, it is
12 illogical to suggest that removal of the sod layer over the pipeline trench results in a total
13 and irreversible loss of prairie. Once construction is complete, TransCanada would
14 restore native prairie using native seed mixes specified by applicable state and federal
15 agencies such that no net loss of native prairie habitat would occur. Prairie grass would
16 begin to grow during the first season after construction and would start establishing
17 habitat suitable for wildlife and livestock. Fully functional prairie vegetative cover
18 would probably occur three to seven years following construction, although species
19 diversity and sod/soil conditions could take several more years to become reestablished
20 similar to preconstruction conditions.

21 The Department of State indicated in its EIS that it would require TransCanada to
22 minimize impacts on native prairie by requiring the siting extra workspaces outside of
23 native prairie habitats, minimizing the width of the construction area within native prairie

1 areas, and continuing consultation with federal and state management agencies on
2 avoidance of native prairie impacts. Where impacts on native prairie are unavoidable, the
3 Department of State would require TransCanada to replace/restore prairie on a 1:1 basis,
4 and monitor restoration in native prairies to ensure that native species become established
5 and to ensure no net loss of native prairie habitats.

6 The South Dakota Public Utilities Commission could further enhance prairie and
7 grassland restoration by requiring the following additional mitigation measures, which
8 are largely consistent with the publication "Prairie Oil and Gas: a Lighter Footprint" by
9 H.M. Sinton, 2001.

- 10 • **Limit grading and avoid soil rutting and sod disturbance in native prairies**
11 **and grasslands to the maximum extent practical.**
- 12 • **Strip topsoil from over the trenchline in native prairies and grasslands to**
13 **preserve roots, rhizomes, bulbs, corms, and rootstocks. Replace topsoil to its**
14 **original horizon during backfilling.**
- 15 • **Conduct construction in native prairie and grasslands in the fall after seed**
16 **drop to achieve better native plant re-establishment.**
- 17 • **Use prairie protector blades to reduce scalping of sod during soil**
18 **replacement in native prairie and grassland. Prairie protectors are flexible**
19 **plastic blades that can be attached to cat or backhoe blades.**
- 20 • **Develop a plan for salvaging a portion of the native prairie and grassland sod**
21 **for use in restoration (onsite and/or offsite). Sod cutters used in the lawn**
22 **industry do not work well for cutting prairie or grassland sod because they**
23 **do not cut deep enough. Asphalt cutters attached to a backhoe have been**

1 used successfully. The sod salvage plan should be prepared by a qualified
2 prairie restoration specialist and submitted to the South Dakota Public
3 Utilities Commission for review and approval prior to construction.

4 **Q:** According to Curt Hohn, the pipeline would impact “Dakota skipper” and the
5 “western prairie fringed orchid” species found in Marshall, Day, Clark and Beadle
6 Counties. Can you comment on this testimony?

7 **A:** The western prairie fringed orchid is a federally threatened species and the Dakota
8 skipper (butterfly) is a candidate species eligible for federal listing. Federally threatened
9 species are afforded more legal protection than candidate species.

10 As a federally listed species, the Department of State is required by Section 7 of
11 the Endangered Species Act (Title 19 USC Part 1536(c)) to ensure that any actions
12 authorized, funded, or carried out by the agency, including issuance of a permit to
13 TransCanada for the Keystone Pipeline Project, do not jeopardize the continued existence
14 of the western prairie fringed orchid or result in the destruction or adverse modification
15 of its designated critical habitat.

16 According to the EIS prepared for this project by the Department of State, the
17 proposed project has the potential to adversely affect the western prairie fringed orchid.
18 By law, the Department of State must enter into formal consultations with the U.S. Fish
19 and Wildlife Service, and the U.S. Fish and Wildlife Service must issue a biological
20 opinion as to whether or not the project would likely jeopardize the continued existence
21 of the western prairie fringed orchid or result in the destruction or adverse modification
22 of its designated critical habitat. If a no jeopardy if found, the U.S. Fish and Wildlife
23 Service may still require reasonable and prudent measures be implemented where an

1 "incidental take" may occur. If jeopardy is found, the Department of State must then
2 confer with the U.S. Fish and Wildlife Service to identify alternatives to avoid jeopardy.
3 The alternatives can be then implemented to avoid jeopardy. In any case, although the
4 project may result in incidental impacts on the orchid, the project would not jeopardize
5 the continued existence of the species.

6 Although highly unusual, an exemption from the Endangered Species Act could
7 be obtained for the western prairie fringed orchid. The exemption process is seldom
8 used, and requested exemptions are not always granted. Even when one is granted, the
9 action agency may be required to adopt specific measures when implementing the
10 proposed action. The exemption process begins only after a species is listed, consultation
11 has occurred, a finding has been made that the action is likely to jeopardize a species, and
12 it is determined that there are no reasonable and prudent alternatives to the agency action.
13 The exemption process is the principle way in which economic factors are intended to be
14 taken into account under the Endangered Species Act.

15 The Department of State is required by Section 7 of the Endangered Species Act
16 to consult with the U.S. Fish and Wildlife Service in the same manner for candidate
17 species as for listed species. According to the EIS, the proposed project has the potential
18 to adversely affect the Dakota Skipper and the Department of State must complete formal
19 consultations with the U.S. Fish and Wildlife Service and receive a biological opinion
20 from the U.S. Fish and Wildlife Service. If the biological opinion determines that the
21 project would likely jeopardize the continued existence of the Dakota skipper or result in
22 the adverse modification of critical habitat proposed to be designated, the Department of
23 State must then confer with the U.S. Fish and Wildlife Service regarding ways to reduce

1 adverse effects. Following conference, the U.S. Fish and Wildlife Service is required to
2 issue a report containing recommendations for reducing adverse effects. These
3 recommendations would be discretionary and the Department of State would not be
4 legally obligated to follow the recommendations. However, the Department of State
5 could adopt the recommendations and require TransCanada to implement the
6 recommendations as a condition of its permit.

7 Given the rigorous consultation process that must be undertaken between the
8 Department of State and U.S. Fish and Wildlife Service, it seems unlikely that the
9 proposed project would jeopardize the continued existence of the western prairie fringed
10 orchid or Dakota skipper or result in the destruction or adverse modification of their
11 designated critical habitats.